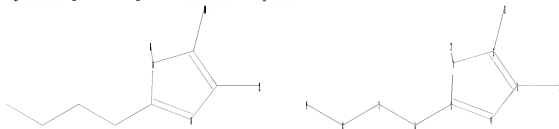


=> S L4

L5 33 L4

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ring nodes :
1 2 3 4 5
chain bonds :
1-12 2-11 3-10 5-6 6-7 7-8 8-9
ring bonds :
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exact/norm bonds :
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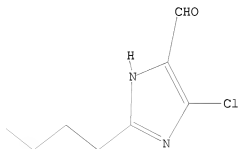
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11:CLASS 12:CLASS

L6 STRUCTURE UPLOADED

=> d

L6 HAS NO ANSWERS

L6 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l6 full  
FULL SEARCH INITIATED 12:12:18 FILE 'CASREACT'  
SCREENING COMPLETE - 2809 REACTIONS TO VERIFY FROM 189 DOCUMENTS  
100.0% DONE 2809 VERIFIED 447 HIT RXNS 81 DOCS  
SEARCH TIME: 00.00.04

L7 81 SEA SSS FUL L6 ( 447 REACTIONS)

=> s l5 and l6  
L5 MAY NOT BE USED HERE  
The L-number entered was not created by a STRUCTURE or SCREEN command.

=> s l4 and l6  
L4 MAY NOT BE USED HERE  
The L-number entered was not created by a STRUCTURE or SCREEN command.

=> file reg  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
ENTRY SESSION  
FULL ESTIMATED COST 154.31 179.88

FILE 'REGISTRY' ENTERED AT 12:12:56 ON 29 MAR 2009  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 27 MAR 2009 HIGHEST RN 1128305-29-2  
DICTIONARY FILE UPDATES: 27 MAR 2009 HIGHEST RN 1128305-29-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and  
predicted properties as well as tags indicating availability of  
experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

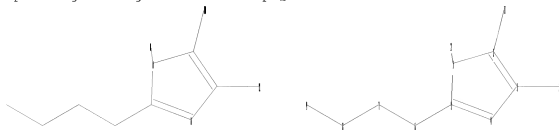
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SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 2884 TO 4516  
PROJECTED ANSWERS: 0 TO 0

L8 0 SEA SSS SAM L6

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ring nodes :  
1 2 3 4 5  
chain bonds :  
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1-12 2-11 3-10 5-6 6-7 7-8 8-9
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Match level :

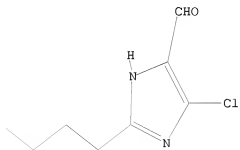
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11:CLASS 12:CLASS

L9 STRUCTURE UPLOADED

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L9 HAS NO ANSWERS

L9 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l9 full

FULL SEARCH INITIATED 12:13:26 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 3374 TO ITERATE

100.0% PROCESSED 3374 ITERATIONS  
SEARCH TIME: 00.00.01

8 ANSWERS

L10 8 SEA SSS FUL L9

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

186.36

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FILE 'CAPLUS' ENTERED AT 12:14:13 ON 29 MAR 2009

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FILE COVERS 1907 - 29 Mar 2009 VOL 150 ISS 14

FILE LAST UPDATED: 27 Mar 2009 (20090327/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l10 and losartan

173 L10

6084 LOSARTAN

1 LOSARTANS

6084 LOSARTAN

(LOSARTAN OR LOSARTANS)

L11 27 L10 AND LOSARTAN

=> s l10 and losartan potassium

173 L10

6084 LOSARTAN

1 LOSARTANS

6084 LOSARTAN

(LOSARTAN OR LOSARTANS)

716594 POTASSIUM

19 POTASSIUMS

716597 POTASSIUM

(POTASSIUM OR POTASSIUMS)

341 LOSARTAN POTASSIUM

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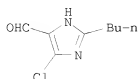
L12 10 L10 AND LOSARTAN POTASSIUM

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L12 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2007:1337054 CAPLUS <<LOGINID::20090329>>  
DOCUMENT NUMBER: 147:541881  
TITLE: Process for preparation of losartan by reaction of the  
corresponding nitrile with sodium azide in the  
presence of triethylamine hydrochloride in a polar  
organic solvent.  
INVENTOR(S): Jang, Sun Young; Kim, Sung Bum; Yun, Sangmin; Kim, Han  
Kyong; Suh, Kwee Hyun  
PATENT ASSIGNEE(S): Hanmi Pharm. Co., Ltd., S. Korea  
SOURCE: PCT Int. Appl., 12pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007133040	A1	20071122	WO 2007-KR2380	20070515
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RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
KR 2007110617	A	20071120	KR 2006-43306	20060515
KR 809159	B1	20080229		
PRIORITY APPLN. INFO.:			KR 2006-43306	A 20060515
OTHER SOURCE(S):	CASREACT 147:541881			

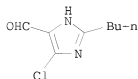
AB Losartan was prepared by reaction of  
2-butyl-4-chloro-5-hydroxymethyl-1-[(2'-cyanobiphen-4-yl)methyl]imidazole  
with Et3N.HCl and NaN3 in a polar organic solvent at 105-135°, addition  
of H2O and acetone adjusting the pH to 2-5, and crystallizing losartan directly  
from the reaction solution. Thus, 2-butyl-4-chloro-5-hydroxymethyl-1-[(2'-  
cyanobiphen-4-yl)methyl]imidazole (preparation given), Et3N.HCl, and NaN3 were  
kept in N-methylpyrrolidone at 120° for 12 h to give 76% losartan.  
IT 83857-96-9, 2-Butyl-4-chloro-1H-imidazole-5-carboxaldehyde  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of losartan by reaction of the corresponding nitrile with  
sodium azide in the presence of triethylamine hydrochloride in a polar  
organic solvent)  
RN 83857-96-9 CAPLUS  
CN 1H-imidazole-4-carboxaldehyde, 2-butyl-5-chloro- (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2009 ACS ON STN  
 ACCESSION NUMBER: 2007:1204486 CAPLUS <<LOGINID::20090329>  
 DOCUMENT NUMBER: 147:486447  
 TITLE: An improved process for the manufacture of  
 Losartan potassium  
 INVENTOR(S): Ramakrishnan, Arul; Bhushan, Vasant Dabholkar; Dinesh,  
 Deore B.; Kundan, Singh Shekhawat  
 PATENT ASSIGNEE(S): Unichem Laboratories Limited, India  
 SOURCE: PCT Int. Appl., 16pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

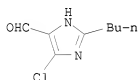
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007119246	A2	20071025	WO 2006-IN365	20060912
<p>W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW</p> <p>RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM</p>				
IN 2006MU00598	A	20081121	IN 2006-MU598	20060417
PRIORITY APPLN. INFO.:			IN 2006-MU598	A 20060417
OTHER SOURCE(S): CASREACT 147:486447				
<p>AB The present invention relates to an improved process for the manufacture of Losartan potassium. The process comprises of condensation of 2-butyl-4-chloro-5-formyl imidazole with 2-cyano-4-bromomethyl biphenyl in a biphasic solvent system under phase transfer catalysis followed by in situ reduction using sodium borohydride. The obtained product is converted to Losartan by treating with sodium azide and an amine salt. Losartan is then converted to its potassium salt by treating it with potassium hydroxide in alc.</p>				
<p>IT 83857-96-9          RL: RCT (Reactant); RACT (Reactant or reagent)          (preparation of Losartan potassium via condensation of 2-butyl-4-chloro-5-formylimidazole with 2-cyano-4-bromomethylbiphenyl)</p>				
<p>RN 83857-96-9 CAPLUS</p>				
<p>CN 1H-Imidazole-4-carboxaldehyde, 2-butyl-5-chloro- (CA INDEX NAME)</p>				



L12 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2007:857748 CAPLUS <<LOGINID::20090329>>  
 DOCUMENT NUMBER: 148:472047  
 TITLE: An improved and practical process for the preparation of losartan  
 INVENTOR(S): Reddy, Arava Veera; Rao, Siripalli Udaya Bhaskara; Rajendiran, Chinnapillai; Jasti, Venkat  
 PATENT ASSIGNEE(S): Suven Life Sciences Ltd., India  
 SOURCE: Indian Pat. Appl., 26pp.  
 CODEN: INXXBQ  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 2005CH01215	A	20070727	IN 2005-CH1215	20050831
KR 2008039333	A	20080507	KR 2007-717789	20070801
PRIORITY APPLN. INFO.:			IN 2005-CH1215	A 20050831
			WO 2005-IN431	W 20051221

OTHER SOURCE(S): CASREACT 148:472047  
 AB The improved process for the preparation of Losartan comprises reacting o-tolylbenzonitrile with a dibromo-dimethylhydantoin to give the corresponding bromo compds., which was reacted with an imidazolecarboxaldehyde compound in presence of a base and phase transfer catalyst to give the corresponding cyano-aldehyde, which is in turn reacted with sodium azide in the presence of tributyltin chloride to give the aldehyde tetrazole derivative which in situ reduced with sodium borohydride to give Losartan.  
 IT 83857-96-9, 2-Butyl-4-chloroimidazole-5-carboxaldehyde  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (an improved and practical process for the preparation of losartan)  
 RN 83857-96-9 CAPLUS  
 CN 1H-Imidazole-4-carboxaldehyde, 2-butyl-5-chloro- (CA INDEX NAME)



L12 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2007:259939 CAPLUS <<LOGINID::20090329>>  
 DOCUMENT NUMBER: 146:295936  
 TITLE: Process for the preparation of Losartan from 4-bromomethyl-2'-cyanobiphenyl and 2-butyl-4-chloroimidazole-5-carboxaldehyde  
 INVENTOR(S): Veera Reddy, Arava; Udaya Bhaskara Rao, Siripalli; Rajendiran, Chinnapillai; Jasti, Venkat  
 PATENT ASSIGNEE(S): Suven Life Sciences, India  
 SOURCE: PCT Int. Appl., 27pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent

LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007026375	A1	20070308	WO 2005-IN431	20051221
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RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
IN 2005CH01133	A	20070928	IN 2005-CH1133	20050816
KR 2008039333	A	20080507	KR 2007-717789	20070801
PRIORITY APPLN. INFO.:			IN 2005-CH1133	A 20050816
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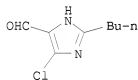
OTHER SOURCE(S): CASREACT 146:295936

AB A process for the preparation of Losartan and its K salt comprises reaction of 4-bromomethyl-2'-cyanobiphenyl with 2-butyl-4-chloroimidazole-5-carboxaldehyde in the presence of a base and a phase transfer catalyst to get cyanobiphenylmethylimidazolecarboxaldehyde, reaction of the latter with NaN3 in the presence of Bu3SnCl to form the tetrazole aldehyde, reduction of the latter with NaBH4 to give Losartan and, if desired, conversion to the K salt.

IT 83857-96-9, 2-Butyl-4-chloroimidazole-5-carboxaldehyde  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(process for the preparation of losartan from bromomethylcyanobiphenyl and butylchloroimidazolecarboxaldehyde)

RN 83857-96-9 CAPLUS

CN 1H-Imidazole-4-carboxaldehyde, 2-butyl-5-chloro- (CA INDEX NAME)

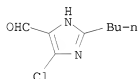


REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2009 ACS ON STN  
ACCESSION NUMBER: 2007:201246 CAPLUS <LOGINID:20090329>>  
DOCUMENT NUMBER: 146:236178  
TITLE: Process for the preparation of losartan and its salts  
INVENTOR(S): Arnalot Aguilar, Carme  
PATENT ASSIGNEE(S): Medichem, S. A., Spain  
SOURCE: PCT Int. Appl., 20pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent

LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007020533	A2	20070222	WO 2006-IB2878	20060505
WO 2007020533	A3	20070830		
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RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA			
CA 2608245	A1	20070222	CA 2006-2608245	20060505
EP 1891055	A2	20080227	EP 2006-809028	20060505
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US 20090076281	A1	20090319	US 2008-913655	20081009
PRIORITY APPLN. INFO.:			US 2005-677843P	P 20050505
			WO 2006-IB2878	W 20060505
AB	The invention relates to the preparation of losartan and its salts (e.g., losartan potassium). More particularly, the invention relates to the preparation of losartan and its salts (e.g., losartan potassium) in a simplified process that provides higher purity losartan potassium and losartan potassium having larger crystal sizes. The invention further includes formulating losartan, its salts (e.g., losartan potassium) and/or in vivo cleavable prodrugs thereof into readily usable dosage units for the therapeutic treatment (including prophylactic treatment) of mammals, including humans. The methods of preparation of losartan and losartan potassium are given.			
IT	83857-96-9			
	RL: RCT (Reactant); RACT (Reactant or reagent) (process for preparation of losartan and its salts)			
RN	83857-96-9 CAPLUS			
CN	1H-Imidazole-4-carboxaldehyde, 2-butyl-5-chloro- (CA INDEX NAME)			



L12 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2007:197510 CAPLUS <<LOGINID:20090329>>  
 DOCUMENT NUMBER: 146:251851  
 TITLE: Process for the preparation of Losartan from  
 2-butyl-4-chloro-5-formylimidazole,

INVENTOR(S): 4'-bromomethyl-2-cyanobiphenyl, and sodium azide.  
Reddy, Arava Veera; Rao, Siripalli Udaya Bhaskara;  
Rajendiran, Chinnappillai; Jasti, Venkat  
PATENT ASSIGNEE(S): Suven Life Sciences, India  
SOURCE: PCT Int. Appl., 22pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007020654	A1	20070222	WO 2005-IN426	20051221
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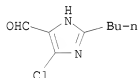
OTHER SOURCE(S): CASREACT 146:251851

AB A process for preparation of Losartan or its K salt comprises reaction of 2-butyl-4-chloro-5-formylimidazole with 4'-bromomethyl-2-cyanobiphenyl in the presence of phase transfer catalyst to give the cyanobiphenylmethylimidazolecarboxaldehyde derivative, reduction of the latter to give the hydroxymethylimidazole derivative, and treatment of the latter with NaN<sub>3</sub> in the presence of Et<sub>3</sub>N.HCl in polar aprotic solvents.

IT 83857-96-9, 2-Butyl-4-chloro-5-formylimidazole  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of Losartan from butylchloroformylimidazole, bromomethylcyanobiphenyl, and sodium azide)

RN 83857-96-9 CAPLUS

CN 1H-Imidazole-4-carboxaldehyde, 2-butyl-5-chloro- (CA INDEX NAME)

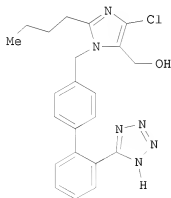


REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2009 ACS ON STN  
ACCESSION NUMBER: 2005:238945 CAPLUS <<LOGINID:20090329>>  
DOCUMENT NUMBER: 142:297992

TITLE: Process for the preparation of losartan potassium  
 INVENTOR(S): Khamar, Bakulesh Mafatlal; Modl, Indravadan Ambalal; Madhusudana, Rao Gajula; Radha, Achanatha; Rajappa, Murali  
 PATENT ASSIGNEE(S): Khamar, Bakulesh, Mafatlal, India; Modl, Indravadan, Ambalal  
 SOURCE: PCT Int. Appl., 22 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005023758	A2	20050317	WO 2004-IB2879	20040904
WO 2005023758	A3	20060323		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
IN 2003MU00907	A	20050715	IN 2003-MU907	20030904
EP 1663998	A2	20060607	EP 2004-769282	20040904
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
US 20070249839	A1	20071025	US 2003-570824	20061031
PRIORITY APPLN. INFO.:			IN 2003-MU907	A 20030904
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OTHER SOURCE(S):			CASREACT 142:297992	
GI				

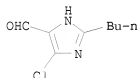


I

AB A novel method for the preparation of trityl losartan (I; R = CPh<sub>3</sub>) and

losartan potassium (I·K; R = H) is reported.  
 Thus, 2-n-butyl-4-chloro-1H-imidazole-5-carboxaldehyde is coupled with N-(triphenylmethyl)-5-[(4'-(bromomethyl)biphenyl-2-yl)]tetrazole in a biphasic solvent system comprising water and an organic solvent in the presence of a base and a phase transfer catalyst at ambient temp provided trityl losartan (I; R = CPh<sub>3</sub>). Subsequent deprotection, reduction of the aldehyde function and trapping as a potassium salt provides losartan potassium (I·K; R = H).

IT 83857-96-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of losartan potassium)  
 RN 83857-96-9 CAPLUS  
 CN 1H-Imidazole-4-carboxaldehyde, 2-butyl-5-chloro- (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2005:120707 CAPLUS <<LOGINID:20090329>>  
 DOCUMENT NUMBER: 142:191264  
 TITLE: Preparation of nitro derivatives of heterocyclic compounds as angiotensin II receptor blockers for therapeutic use  
 INVENTOR(S): Almirante, Nicoletta; Del Soldato, Piero; Ongini, Ennio  
 PATENT ASSIGNEE(S): Nicox S.A., Fr.  
 SOURCE: PCT Int. Appl., 104 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005011646	A2	20050210	WO 2004-EP51550	20040720
WO 2005011646	A3	20050421		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TZ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2004260830	A1	20050210	AU 2004-260830	20040720
CA 2534451	A1	20050210	CA 2004-2534451	20040720
EP 1653950	A2	20060510	EP 2004-766269	20040720

EP 1653950 B1 20080109  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK

CN 1832742 A 20060913 CN 2004-80022483 20040720  
BR 2004013028 A 20061003 BR 2004-13028 20040720  
JP 2007500684 T 20070118 JP 2006-521571 20040720  
AT 383155 T 20080115 AT 2004-766269 20040720  
ES 2299861 T3 20080601 ES 2004-766269 20040720  
AU 2005263655 A1 20060126 AU 2005-263655 20050202  
CA 2574666 A1 20060126 CA 2005-2574666 20050202  
WO 2006008196 A1 20060126 WO 2005-EP50459 20050202

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,  
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GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,  
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM,  
SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
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CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM,  
KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG,  
KZ, MD, RU, TJ, TM

EP 1778617 A1 20070502 EP 2005-707928 20050202  
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,  
IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA,  
HR, LV, MK, YU

CN 1984871 A 20070620 CN 2005-80024051 20050202  
JP 2008506748 T 20080306 JP 2007-521923 20050202  
KR 2006056352 A 20060524 KR 2006-701893 20060126  
US 20060276523 A1 20061207 US 2006-566292 20060127  
MX 2006001263 A 20060411 MX 2006-1263 20060131  
IN 2006CN00674 A 20070608 IN 2006-CN674 20060223  
NO 2006000900 A 20060224 NO 2006-900 20060224  
US 20070238882 A1 20071011 US 2007-632666 20070117  
IN 2007CN00727 A 20070824 IN 2007-CN727 20070220

PRIORITY APPLN. INFO.: EP 2003-102379 A 20030731  
WO 2004-EP51550 W 20040720  
WO 2005-EP50459 W 20050202

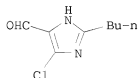
OTHER SOURCE(S): CASREACT 142:191264; MARPAT 142:191264

AB Angiotensin II receptor blocker nitro derivs. of formula (I): R-(Y-ONO2)s  
(I) having wider pharmacol. activity and enhanced tolerability are  
claimed. They can be employed for treating cardiovascular, renal and  
chronic liver diseases and inflammatory processes.

IT 83857-96-9, 2-Butyl-4-chloro-5-formylimidazole  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of nitro derivs. of heterocyclic compds. as angiotensin II  
receptor blockers for therapeutic use)

RN 83857-96-9 CAPLUS

CN 1H-Imidazole-4-carboxaldehyde, 2-butyl-5-chloro- (CA INDEX NAME)



RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2004:414643 CAPLUS <<LOGINID:20090329>>  
 DOCUMENT NUMBER: 140:412339  
 TITLE: Crystalline form of losartan potassium  
 INVENTOR(S): Reddy, Manne Satyanarayana; Eswaraiiah, Sajja; Koppera, Ravinder Reddy; Reddy, Vajrала Venkata  
 PATENT ASSIGNEE(S): Reddy's Laboratories Limited, India; Reddy's Laboratories, Inc.  
 SOURCE: U.S. Pat. Appl. Publ., 11 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040097568	A1	20040520	US 2003-629316	20030729
IN 2002MA00568	A	20070727	IN 2002-MA568	20020729
PRIORITY APPLN. INFO.:			IN 2002-MA568	A 20020729

AB A compound that is a crystalline Form III of losartan potassium is provided. Also provided are compns. containing the compound and methods for its preparation For example, 125 g of trityl losartan (preparation given) was

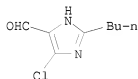
mixed with an aqueous solution containing 11 g of KOH, 125 mL water, and 1250 mL methanol

until the reaction was complete. The solvent was distilled off the reaction solution under vacuum, and water (325 mL) added to the residual mass, stirred for 30 min, the pH adjusted to 8.2 to 8.8, and the mass filtered. The filtrate was washed with water, the water was distilled off, and the resulting residue was dissolved in methanol, the solvent distilled off, and the residual mass cooled to a temperature of 5 to 10°, filtered, and dried to yield crystalline polymorph Form III of losartan potassium (weight 43.0 g). The crystalline polymorph Form III of losartan potassium was also obtained from crystalline polymorph Form I of losartan potassium.

IT 83857-96-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of crystalline form of losartan potassium for dosage forms)

RN 83857-96-9 CAPLUS

CN 1H-imidazole-4-carboxaldehyde, 2-butyl-5-chloro- (CA INDEX NAME)



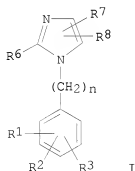
L12 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1999:233795 CAPLUS <<LOGINID:20090329>>  
 DOCUMENT NUMBER: 130:252358  
 TITLE: Use of an imidazole angiotensin II receptor

antagonists for the preparation of drugs to increase the survival rate of renal transplant patients  
 Remuzzi, Giuseppe  
 Merck Sharp Dohme (Italia) S.P.A., Italy  
 PCT Int. Appl., 92 pp.  
 CODEN: PIXXD2  
 Patent  
 English  
 DOCUMENT TYPE:  
 LANGUAGE:  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9916437	A1	19990408	WO 1998-IT259	19980930
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2303217	C	19990408	CA 1998-2303217	19980930
CA 2303217	A1	19990408		
AU 9893666	A	19990423	AU 1998-93666	19980930
AU 754852	B2	20021128		
EP 1019048	A1	20000719	EP 1998-946713	19980930
EP 1019048	B1	20040121		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001517698	T	20011009	JP 2000-513573	19980930
AT 258051	T	20040215	AT 1998-946713	19980930
PT 1019048	T	20040531	PT 1998-946713	19980930
ES 2213296	T3	20040816	ES 1998-946713	19980930
US 20020115702	A1	20020822	US 2002-76396	20020219
US 6576652	B2	20030610		

PRIORITY APPLN. INFO.:  
 IT 1997-RM586 A 19970930  
 WO 1998-IT259 W 19980930  
 US 2000-509791 A1 20000330

OTHER SOURCE(S):  
 GI MARPAT 130:252358

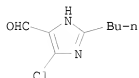


AB Imidazoles I [R1 = 4-CO2H, OS(O)(OH)2, C(CF3)2OH, etc.; R2 = H, Cl, iodo, etc.; R3 = H, Cl, Br, alkyl, etc.; R6 = alkenyl, alkyl, cycloalkyl, etc.; R7 = H, F, NO2, etc.; R8 = H, cyano, alkyl, etc.] and in particular losartan potassium, angiotensin II receptor antagonists, were prepared

IT 83857-96-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of imidazole angiotensin II receptor antagonists)

RN 83857-96-9 CAPLUS

CN 1H-Imidazole-4-carboxaldehyde, 2-butyl-5-chloro- (CA INDEX NAME)



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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